

US EPA ARCHIVE DOCUMENT

Results-Based Approaches to Corrective Action (updated 7/26/00)



Issued by
the Office of Solid Waste

Note: This document provides guidance to EPA and states regarding groundwater at facilities subject to RCRA Corrective Action. It also provides guidance to the public and the regulated community on how EPA intends to exercise its discretion in implementing its statutory authorities and regulations. The document does not, however, substitute for EPA's statutes or regulations, nor is it regulation itself. Thus, it cannot impose legally-binding requirements on EPA, States or the regulated community, and may not apply to a particular situation based upon the circumstances. EPA may change this guidance in the future as appropriate.

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A. Overview

The Resource Conservation and Recovery Act (RCRA) regulatory structure ensures that owners and operators generating hazardous waste from ongoing industrial operations properly manage their waste and do not contribute to a future generation of toxic waste sites. The RCRA corrective action program oversees the cleanup of existing contamination and any future contamination at these operating industrial facilities. In its ongoing effort to improve the corrective action program, EPA, with the assistance of interested stakeholders, identified several improvements to increase the efficiency and cost-effectiveness of facility cleanups.

One of the improvements, as outlined under the RCRA Cleanup Reforms (July, 1999) (EPA530-F-99-018) announcement (available at: www.epa.gov/epawaste/hazard/correctiveaction/reforms/index.htm), “results-based” cleanup guidance. Greater use of results-based corrective action approaches has been EPA’s stated policy since the 1996 Advanced Notice of Proposed Rulemaking (ANPR), *Corrective Action for Solid Waste Management Units at Hazardous Waste Management Facilities* (61FR 19432). Results-based corrective action encourages technical and administrative innovation to achieve environmentally protective cleanups on a facility-specific basis.

EPA’s results-based strategy provides a recommended framework for RCRA program implementors to run programs that most effectively use available corrective action cleanup tools and private party resources to address environmental problems. Project managers should weigh the facility-specific circumstances, including the cooperativeness and technical capability of the facility owner/operator, in deciding the specific approaches to be taken at a given facility. EPA plans to issue separate and detailed guidance on some of the results-based approaches described in Section F to expand on when it is appropriate to take various approaches. The first of these detailed guidances addresses tailored oversight¹.

B. Why are we issuing this document?

We are providing this overview so that EPA and state agency project managers (“project managers”) and owner/operators will begin to understand and routinely incorporate results-based approaches where appropriate into their cleanups. Throughout the years of implementing the Corrective Action program and other cleanup programs (e.g., the Superfund program), we have developed results-based approaches that project managers and owner/operators may use to more efficiently identify releases and risks, and increase the pace of facility cleanup. This document presents an overview of some of the approaches available to project managers for their consideration at facilities that are subject to RCRA corrective action.

¹See “*Results-Based Approaches to Corrective Action: Tailored Oversight Guidance*” (date)

In response to the Government Performance and Results Act of 1994 (GPRA), EPA has set challenging goals to ensure near-term protection of human health and the environment at RCRA Corrective Action facilities. Our GPRA goal is to achieve two Environmental Indicators (see box) at over 1700 sites that have actual releases of hazardous waste and/or substances, primarily from historical disposal practices. GPRA goals represent EPA's interim goals. Our long-term goal remains achieving final facility-wide cleanups. Since the advent of GPRA, EPA and states have been reassessing how we are implementing our Corrective Action programs and putting new policies in place to most effectively meet GPRA goals. A successful RCRA program allows flexible program implementation that incorporates many different technical solutions and administrative approaches to site management. Approaches that focus owner/operators on program goals and appropriately reduce the process towards attaining those goals are termed "results-based," and are the primary subject of this document. In conducting RCRA corrective action and cleanups under other programs, EPA regions and states have found that results-based approaches can result in more efficient and expedient implementation of cleanup activities at facilities. This document provides a recommended framework based upon this experience.

Environmental Indicators ("EIs")- results-based measures of corrective action progress that summarize current conditions at a site and are the primary measures of EPA's interim cleanup goals.

The GPRA goals for the RCRA corrective action program are that, by 2005, EPA and authorized states will have verified that 95% of high priority RCRA facilities have met the human exposures controlled environmental indicator and that 70% of high priority RCRA facilities have met the groundwater releases controlled environmental indicator.

C. What do we mean by results-based approaches to corrective action?

The purpose of the corrective action program is to address releases of hazardous waste at RCRA facilities in a timely manner. Results-based approaches emphasize outcomes, or results, in cleaning up actual releases, rather than the process used to achieve those results. Results-based approaches involve setting goals and, where appropriate, allowing owner/operators to move towards those goals without the implementing agency unnecessarily dictating how owners or operators will attain the goals. Under such approaches, owner/operators are held accountable for the results they agree to with their project manager.

D. What are the benefits of results-based corrective action?

The benefits are:

- project managers and owner/operators focus on the end goals of corrective action as well as the intermediate milestones, such as EIs, rather than on unnecessary adherence to a predetermined administrative process
- results are generally achieved faster; and
- resource savings to both owner/operator and implementing agency

E. What are the expected program results?

EPA expects that all final remedies will be protective of human health and the environment. This typically means that remedies achieve media cleanup objectives (which includes attainment of media cleanup levels at appropriate points of compliance, and remediation time frames), and remediate the sources of releases. Since there may be more than one remedy that meets these general goals we have established some recommended balancing criteria. These criteria include long-term effectiveness; toxicity, mobility, and volume reduction; short term effectiveness; implementability; cost; community acceptance; and state acceptance. A key step in results-based project management is the project manager and the owner/operator discussing these goals. (The Corrective Action Results-Based Project Management Workshop has some good information regarding results. For more information please see the Corrective Action Homepage at <www.epa.gov/correctiveaction>.) EPA also expects the public to be meaningfully involved in the selection of a final remedy and at points throughout the cleanup process.

F. What are some approaches to results-based corrective action?

Described below are five overarching approaches that project managers and owner/operators should strive to incorporate into facility cleanup plans. These five baseline approaches are the foundation for results-based corrective action. Four supplemental approaches are also described that may serve to further reduce process in appropriate circumstances and expedite cleanup depending upon site-specific factors. These approaches will not make sense to implement at all sites. While the Agency encourages project managers and owner/operators to view sites holistically, maximize procedural flexibility, tailor oversight, establish clear, reasonable, and protective performance standards, and target data collection, we also encourage project managers and owner/operators to use as many of the supplemental approaches as appropriate. The extent to which these approaches are taken depends on facility-specific circumstances. While described briefly here, guidance is available on some of the approaches (*e.g.*, presumptive remedies), and where available, is referenced at the end of each description. As mentioned earlier, we plan to issue additional guidance on some of the approaches in this section in the future.

Baseline Approaches

Tailored oversight - Oversight, in general, is the management of all activities related to corrective action. Tailored oversight is an oversight plan developed between the project manager and the owner/operator based on facility-specific conditions such as site complexity, compliance history, and financial and technical capability of the owner/operator. In addition to discussing and utilizing results-based approaches with facility owner/operators, project managers should evaluate the facility-specific conditions and develop an appropriate level of oversight that will enhance timely, efficient, and protective cleanups. Tailored oversight allows project managers to eliminate administrative or technical steps for owner/operators who have agreed to, and have demonstrated that they are capable of, meeting the environmental objectives established for their facility. In some

instances, an analysis of facility capabilities may result in oversight that includes additional requirements that ensure environmental results are achieved in a timely manner.

Holistic Approach - The 1996 ANPR states, “In general, EPA believes that a holistic approach to corrective action, could increase cleanup efficiency and reduce transaction costs” (see 61 FR 19456). By taking a “big picture” look at a facility, project managers can prioritize and address environmental problems based on overall risk rather than focusing on individual units. For example, if several Solid Waste Management Units (SWMUs) may have contributed to off-site ground water contamination, a holistic approach would focus on addressing human exposures due to an off-site ground water plume in advance of conducting a SWMU-by-SWMU analysis that would ultimately deal with source control. EPA believes that a holistic approach should facilitate meeting the Environmental Indicators since they are facility-wide measures.

Procedural flexibility - Project managers and facility owner/operators should place their primary focus on environmental results rather than process steps and ensure that each corrective action- related activity at any given facility directly supports cleanup goals at that site. The corrective action process is generally structured around five core objectives common to most cleanup activities: facility-wide assessments, addressing all SWMU releases, selecting remedies within an acceptable risk range and hazard index, public participation throughout corrective action, and preference for treatment of principle threats. EPA emphasizes that no one results-based approach to implementing these cleanup elements is likely to be appropriate for all corrective action facilities; therefore, a successful corrective action program should be procedurally flexible. EPA continues to encourage program implementors and facility owner/operators to focus on the desired result of cleanup rather than a mechanistic cleanup process. These five elements should be viewed as evaluations generally necessary to make good cleanup decisions. In focusing on results, project managers are encouraged to use the most effective approaches for facility management and oversight.

Performance Standards - The project manager, working with the owner/operator, can develop performance standards to prescribe the scientific, technical, and administrative requirements the owner/operator must fulfill in order to complete corrective action. This approach emphasizes that the facility owner/operator, not the overseeing agency, is responsible for attaining performance standards, *e.g.*, designing and completing a successful remedy. It is the project manager's responsibility to establish clear, reasonable, and protective performance standards. It is the owner/operator's responsibility to meet the established performance standard(s).

Targeted Data Collection - Project managers and facility owner/operators should tailor data gathering strategies to the purpose for which the data will be used. The data gathered should support selection and implementation of appropriate responses at the facility. The overall degree of data quality or uncertainty that a decision maker is willing to accept is referred to as the Data Quality Objective (DQO) for a decision. The DQO is used to specify the quality of the data, rather than a pre-determined set of sampling requirements. Project managers and facility owner/operators using innovative site characterization and assessment approaches should pay particular attention to DQOs. (see Data Quality Objectives for Remedial Response Activities, OSWER Directive 9335.0-7B and

Supplemental Approaches

Presumptive Remedies - The Superfund program began developing presumptive remedy guidance in 1991 using past experience to streamline cleanups. Presumptive remedies are preferred technologies for common categories of sites, based on historical patterns of remedy selection and EPA's scientific and engineering evaluation of performance data on technology implementation. We expect project managers to use presumptive remedies at appropriate RCRA facilities to help ensure consistency in remedy selection and implementation and to reduce the cost and time required to investigate and remediate similar types of sites. In general, even though the Agency's presumptive remedy guidances were developed for CERCLA sites, project managers should use them at appropriate RCRA corrective action facilities to focus investigations and simplify the evaluation of remedial alternatives and remedy selection processes. Guidance on specific presumptive remedies is available for: Municipal Landfill Sites; CERCLA Sites with Volatile Organic Compounds in Soils; and, Soils, Sediments and Sludges at Wood Treating Sites. (Available at <http://www.epa.gov/superfund/cleanup/index.htm> .)

Innovative Technologies - EPA expects project managers and owner/operators to consider using innovative technology when such technology offers the potential for comparable or superior treatment performance or implementability, fewer adverse impacts, or lower costs for acceptable levels of performance when compared to more conventional technologies. In some cases, results-based cleanups may allow for innovative approaches as long as the owner or operator achieves and documents the agreed-upon results. We believe that results-based approaches allows for this kind of flexibility to incorporate many different technical solutions and approaches to site management. EPA's Technology Innovation Office maintains a website that offers a number of resources related to innovative technologies. Please refer to: <http://www.clu-in.org/>.

Phased Approach - Significant efficiencies may be gained by phasing corrective action at individual facilities to focus first on areas of the facility that represent the greatest near-term threat to human health and/or the environment. Using a phased approach, investigation and cleanup actions can be taken at high priority areas of the facility in order to address the greatest risk and help achieve environmental indicators. For example, a phased approach might first focus the owner/operator on meeting EIs, then after meeting EIs, the project manager and owner/operator could discuss remediation time frames and how to achieve a final cleanup using a phased approach. A project manager could also make use of the phased approach where the owner/operator is interested in selling or redeveloping part of the facility property.

Facility-Lead Corrective Action Agreements- Many of the concepts in this document have been addressed by programs overseeing cleanup in advance of issuance of a permit or order. Facility-lead corrective action agreements are simple letters of intent from the implementing agency to the owner/operator containing broad performance standards to provide a framework for guiding corrective

action. The advantage of this approach is that it provides an opportunity for expediting corrective action activities and reducing the amount of resources expended by both parties. These letters are non-binding but may appeal to an owner/operator who wants to sell their property or conduct corrective action requirements prior to receiving a permit or order. Owner/operators interested in a facility-lead approach should contact the implementing agency if they are interested in pursuing this option. The implementing agency will decide what approach to take depending on facility-specific circumstances. Under facility-lead corrective action, it is important for all parties to understand what environmental results are expected by the implementing agency and how the owner/operator should go about meeting the results with the appropriate level of oversight.

G. Conclusion

By making their primary focus results, project managers and owner/operators are able to efficiently and cost-effectively manage facility-wide clean ups. Results-based approaches provide the RCRA program with tools to address environmental contamination in ways that protect human health and the environment yet allow project managers to better tailor the approaches to facility-specific factors. Project managers should consider these factors in determining whether to use streamlined or more traditional approaches in helping owner/operators fulfill their corrective action obligations. Finally, by utilizing results-based approaches, results are expeditiously achieved and implementing agencies and owner/operators experience resource savings.

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Results-Based Approaches to Corrective Action: Tailored Oversight Guidance

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I. General Information

As mentioned in the “Results-Based Approaches to Corrective Action: Overview,” this guidance addressing tailored oversight is the first in a series of guidance documents EPA plans to issue related to results-based approaches to corrective action. EPA chose tailored oversight as the first approach on which to provide more detail, because we believe the concepts discussed in this guidance should be considered at all facilities subject to corrective action, particularly those sites that are part of the RCRA cleanup baseline. This guidance and other subsequent results-based guidances are more specific supporting documents to the concepts explained in the Overview.

a. What is the purpose of this guidance?

This guidance:

- promotes appropriate national consistency in implementing tailored oversight
- recommends factors to consider in determining where and how to tailor oversight for a facility
- should be considered at facilities subject to RCRA corrective action, and is particularly focused on the RCRA cleanup baseline (*i.e.*, the 1714 high priority facilities) in an effort to meet the Government Performance and Results Act (GPR) goals

b. Why are we issuing this guidance?

Under the Government Performance and Results Act (GPR), EPA has set challenging goals to protect human health and the environment at RCRA corrective action facilities. Since the advent of GPR, EPA and the States have been reassessing how we are implementing our corrective action programs and putting new policies in place to most effectively meet GPR goals.

As part of this reassessment effort, EPA, in July 1999, announced its RCRA Cleanup Reforms (EPA530-F-99-018). The intent of the reforms is to promote faster, focused and more flexible approaches to facility cleanups. One way we hope to achieve that goal is by stressing results-based approaches to corrective action. The “Results Based Approaches to Corrective Action: Overview” describes what we believe are the primary results-based approaches. Included among these approaches is tailored oversight. Project managers and facility owner/operators should focus on environmental results and ensure that each corrective action-related activity, at any given facility,

The GPR goals for the RCRA corrective action program are that, by 2005, EPA and authorized states will have verified that 95% of high priority RCRA facilities have met the human exposures controlled environmental indicator* and that 70% of high priority RCRA facilities have met the groundwater releases controlled environmental indicator.*

*For more information on Environmental Indicators please see the Corrective Action Website www.epa.gov/correctiveaction

directly supports cleanup goals at that facility. A successful RCRA Corrective Action program means flexible implementation that incorporates many different technical solutions and administrative approaches to site-management. One significant area of flexibility is corrective action oversight and how we implement it at individual facilities. Tailored oversight should be considered at all facilities as appropriate. The degree to which oversight occurs is dependent on site-specific factors, some of which are outlined in section II.a of this guidance.

We believe that state and federal project managers should appropriately evaluate and implement tailored oversight at facilities requiring corrective action. Tailored oversight is a significant tool in the overall diversified strategy of results-based project management. We expect program implementors to use tailored oversight to help run programs that effectively and efficiently use resources to address environmental problems.

c. What is tailored oversight?

Oversight in general, is the management of all activities related to corrective action at a site. The tailored oversight approach encourages project managers and owner/operators to develop a plan that allows for the appropriate level of oversight rather than a pre-determined “one size fits all” process. The project manager should base the oversight plan on facility-specific conditions and owner/operator capabilities.

In addition to discussing and utilizing appropriate results-based approaches with facility owner/operators, project managers should evaluate the facility-specific conditions and develop an appropriate level of oversight that will ensure timely, efficient, and protective cleanups. Tailored oversight allows project managers to modify the typical or historically used administrative or technical steps for owner/operators who have agreed to, and are capable of, meeting the environmental objectives established for their facility. For other owner/operators (e.g., those that lack technical knowledge or demonstrate unwillingness) heightened oversight may still be appropriate.

The Corrective Action Oversight Guidance, (OSWER Directive, EPA / 9902.7), issued in January 1992 addressed the subject of tailored oversight at corrective action facilities. This guidance does not supercede the 1992 guidance. It reaffirms its intent to encourage project managers to tailor oversight to site circumstances and expands on the message. Both this and the 1992 guidance emphasize that the responsibility for cleanup lies with the owner/operator and stress that there are flexible approaches to cleanups.

d. What are the benefits of tailored oversight?

The benefits of tailored oversight are:

1. Efficiently and appropriately applying oversight potentially provides an opportunity for resource savings for both the implementing agency and the owner/operator.
2. Potential for achieving results faster because expectations are clearly communicated

and documented and unnecessary administrative steps are eliminated. (e.g. interim deliverables, duplicative federal/state reviews)

3. Oversight resources are tailored to site-specific factors.
4. A higher level of certainty is provided to both project managers and owner/operators because corrective action objectives and the oversight approach are discussed at the beginning of corrective action activities.

e. Does tailored oversight result in less protective cleanups?

No. EPA's primary goal remains protecting human health and the environment. Tailored oversight does not change the overall RCRA corrective action program² objectives or level of interim and final cleanup results as determined by the project manager. It takes advantage of the inherent flexibility in the RCRA program that may allow an owner/operator to reach those results faster or provides opportunities for more oversight so EPA or the state can assure the cleanup is protective. Achieving these results more efficiently is a benefit to all stakeholders.

II. Tailored Oversight

a. How does a project manager use tailored oversight?

There are a number of criteria we generally expect project managers to use to evaluate opportunities for tailoring oversight at a particular facility. The recommended criteria listed below come from previous guidances (see "Corrective Action Oversight," February 7, 1992, and "Reducing Federal Oversight at Superfund Sites with Cooperative and Capable Parties," July 31, 1996; OSWER directive (9200.4-15) "Reducing Federal Oversight at Superfund Sites with Cooperative and Capable Parties" which recommends some of these criteria was superseded by OSWER Directive (9200.0-32P) "Interim Guidance on Implementing the Superfund Administrative Reform on PRP Oversight" on 5/12/2000) and the experience of EPA regional and state personnel overseeing corrective action.

Recommended Evaluation Criteria

- Severity of risk to human health and/or the environment,
- Site complexity,
- Compliance history of the owner/operator,
- Public concern or facility's record of public involvement on environmental issues,
- Financial capability of the owner/operator,
- Existence of incentives and motivation to expeditiously and willingly clean up the facility, and
- Demonstrated technical capability of owner/operator

²These overall objectives include: facility-wide assessments, addressing all SWMU releases, selecting remedies within an acceptable risk range and hazard index, public participation throughout corrective action, and preference for treatment of principle threats.

Please note that you should weigh each criterion separately against the site-specific conditions that exist at the facility. For example, a facility owner/operator who is undertaking significant stakeholder outreach, has gained the trust of the community, is cooperative with the overseeing agency, has a good compliance record, yet has complicated site characteristics and may not know the full extent of contamination, may be subject to reduced oversight where deemed appropriate by the project manager. The project manager's evaluation of the facility against the other criteria will determine where to tailor oversight according to facility-specific conditions.

Compliance history is a key element in determining the level of oversight to be used at a facility. Oversight may be reduced if an owner/operator has demonstrated a willingness and ability to cooperatively perform necessary cleanup activities. For non-compliant owner/operators, oversight may be increased, and program implementers should take appropriate actions to bring these parties back into compliance.

Another generally critical element in analyzing how to tailor oversight for a facility is the owner/operator's active participation in developing a tailored oversight approach. In addition, an owner's/operator's willingness and motivation to achieve interim measures or final cleanup, increases the likelihood of a successful outcome using tailored oversight. Again, you should look at all the evaluation criteria and then tailor the oversight appropriately.

Regardless of the level of oversight used at a facility, the owner/operator retains the ultimate responsibility for attaining and documenting results. Clear and measurable results (e.g., Environmental Indicators, final cleanup levels, public participation expectations, performance standards), established at the beginning, will help the owner/operator demonstrate that the remedy meets RCRA requirements.

b. How are results-based corrective action objectives established under tailored oversight approaches?

What are some of the general questions we ask when considering risk at a facility?

What is/are the:

- actual or potential exposures of nearby populations, animals, or plants to hazardous constituents
- actual or potential contamination of drinking water supplies or sensitive ecosystems
- other situations that may pose threats to human health or the environment.
- presence of hazardous wastes or hazardous constituents in drums, barrels, or other bulk storage containers that may pose a threat of release
- risks of fire or explosion or the potential for exposure to hazardous constituents as a result of an accident or failure of a container or handling system
- presence of high levels of hazardous constituents in soils at or near the surface that may migrate
- further degradation of the affected media that may occur if remedial action is not initiated expeditiously
- weather conditions which may cause releases of hazardous constituents or migration of existing contamination
- the time required to develop and implement a final remedy

The cornerstone of effective oversight for corrective action activities is a clear **--and documented--** understanding of site-specific objectives and expected results. Without clear objectives, the prospect of achieving results that will satisfy EPA or the State is greatly reduced. We recommend that project managers and owner/operators state objectives (*e.g.*, defining the lateral and vertical extent of contamination) and expected results (*e.g.*, EIs) in all key decision documents and reports. Tailored oversight, without clearly defined objectives, is susceptible to unfocused investigations, irrelevant data, slow cleanups, and added costs.

c. What are the “results” we are looking to achieve?

As emphasized in the Advanced Notice of Proposed Rulemaking (ANPR), *Corrective Action for Solid Waste Management Units at Hazardous Waste Management Facilities* (61FR 19432), EPA believes that program implementation should focus on results rather than on any one prescriptive linear process to achieve them. Using EIs as an example, EPA is most interested in knowing that the two Environmental Indicators have been achieved at a facility, as opposed to the number or sequence of events and reports leading up to achieving the EIs. Therefore, program implementors should have a clear understanding of the “interim” and “final” results that the Corrective Action program seeks to achieve. **While interim measures are particularly important to achieve the Environmental Indicator goals, Corrective Action obligations remain until final remedial measures are complete.**

d. What should be done to communicate cleanup objectives to all stakeholders?

The first step for the project manager and owner/operator should be to develop a common understanding of the expectations and objectives for the near and long-term clean up of the facility. The project manager should develop these expectations and objectives with appropriate input from the owner/operator and interested public. These should include written goals and objectives that direct the remediation efforts. Not only should the project manager and owner/operator integrate these into the scoping and planning efforts for the facility, but they should routinely verify that the progress at the facility is consistent with the expectations and objectives. The following table lists some of the criteria that we recommend considering before selecting a final remedy. In addition to the table below, the *Corrective Action Workshop: Results-Based Project Management* has some thorough references that describe what our general expectations are for both interim and final remedies. You will find these references at the corrective action homepage, <www.epa.gov/correctiveaction>.

Remedy Balancing Criteria

- 1.) Long-term reliability and effectiveness, along with the degree of certainty that remedies will remain protective of human health and the environment, considering, as appropriate: the magnitude of risks that will remain at a site from untreated hazardous wastes and hazardous constituents and treatment residuals; and, the reliability of any containment systems and institutional controls
- 2.) Reduction of toxicity, mobility or volume through treatment of hazardous wastes and hazardous constituents, including how treatment is used to address principal threats posed by the facility, and the degree to which remedies employ treatment that reduces the toxicity, mobility or volume of hazardous waste and hazardous constituents, considering, as appropriate: the treatment processes to be used and the amount of hazardous waste and hazardous constituents that will be treated; the degree to which treatment is irreversible; and the types of treatment residuals that will be produced
- 3.) Short-term effectiveness and short-term risks remedies pose, along with the amount of time it will take for remedy design, construction and implementation
- 4.) Ease or difficulty of remedy implementation, considering, as appropriate: the technical feasibility of constructing, operating and monitoring the remedy; the administrative feasibility of coordinating with and obtaining necessary approvals and permits from other agencies; and the availability of services and materials, including capacity and location of needed treatment, storage and disposal services
- 5.) Capital and operation and maintenance costs, and the net present value of the capital and operation and maintenance costs
- 6.) The degree to which remedies are acceptable to the surrounding community
- 7.) The degree to which remedies are acceptable to the state in which the subject facility is located.

e. What documents should project managers provide to owner/operators?

A project manager should provide the owner/operator with any document used to help define the expected results. This is a key step in making sure the objectives and results of a cleanup are clearly communicated among all parties. Several key policy documents are available online, which makes it easier for all stakeholders to access these documents. Online documents include the Environmental Indicator (EI) guidance which is the primary focus of the Agency's near-term goals. The boxed list to the right contains some of the possible documents that owner/operators might find useful.

Examples of Documents to Share with the Owner/Operator

- Environmental Indicator Guidance
- Management of Remediation Waste Under RCRA
- Post Closure Rule
- HWIR-media Rule
- ANPR
- Soil Screening Guidance: User's Guide
- Corrective Action Plan
- CA Workshop "Results-Based Project Management"

These guidances and others can be found at www.epa.gov/correctiveaction

f. Where can a project manager tailor oversight using this results-based approach?

A project manager can determine the appropriate level of oversight by considering influencing factors such as risk and public concern and specific activities such as sampling events and construction activities. Project manager and owner/operators must keep in mind that oversight is a dynamic process and we must balance public information needs with streamlining when developing tailored oversight plans. The level may change throughout the course of corrective action. Once the overall level of oversight is established, specific levels of oversight can be determined for specific activities. For example, general expectations for low, medium, and high levels of oversight could be:

- Low: minimal role of the project manager that primarily consists of establishing performance standards and verifying that the owner/operator has achieved these standards, after notice and certification by the owner/operator.
- Medium: increased role of project manager including increased facility visits, inspections, and more stringent review and verification of an increased number of submittals.
- High: the project manager directly manages an intensive effort during which all documents are thoroughly reviewed.

EPA defines oversight as “the management of all activities related to the corrective action process.” (See “RCRA Corrective Action Outyear Strategy (CAOS),” September 1989.) The project manager may determine the appropriate level of oversight by using the evaluation criteria discussed earlier (section II.a).

The following is a list of some oversight activities that you may adapt to a particular facility to decrease the level of oversight as you deem appropriate. These include, but are not limited to:

- Eliminating duplicative state/federal reviews of documents
- Eliminating interim deliverables while maintaining accountability of the owner/operator to produce a measurable end product
- Time limited review where agency approval is not required for the owner/operator to proceed
- Increasing the use of meetings, briefings, and other communication methods to identify and resolve issues early on rather than using formal documentation methods
- Limiting the number of facility visits for routine field activities when the owner/operator demonstrates competence in achieving remedial results, including public involvement
- Establish performance standards that define clear and attainable results
- Using briefings, conversations, and progress reports from the owner/operator to replace some of the formal interim deliverables while still making this information publicly available where appropriate
- Encouraging communication among the project manager, owner/operator and the community. For example, make up-to-date facility information available at publically accessible locations. Public participation remains a key component of the corrective action process.

g. How does tailored oversight affect formal reporting?

Using tailored oversight, the project manager may modify the number of formal reports an owner/operator submits to the agency based on site-specific factors and the owner/operator's capabilities. For example, the project manager may replace some of the traditional formal reporting requirements in permits with informal communication approaches. An order should be written flexibly if informal communication is going to be used as a means of reporting. If, however, a project manager tailors oversight at this level and the owner/operator doesn't achieve the stated or agreed upon results, the project manager may alter the oversight plan by reverting to more formal reporting requirements and a higher level of oversight.

Although there are a reduced number of documents expected to be submitted when tailored oversight is implemented, the necessary documentation to keep the administrative record complete will still be required. A few examples to include might be investigative workplans, remedy decisions, both interim and final.

h. Does tailored oversight mean reduced data quality?

No. Tailored oversight means that the project manager should work with the owner/operator to ensure the appropriate level of oversight. Part of tailoring oversight is defining the problem that the owner/operator needs to address. Once the project manager defines the problem, he or she can help the owner/operator develop a data gathering plan to obtain sufficient high quality data that will allow for remedy decisions. Regardless of the level of oversight, the owner/operator has the responsibility to provide sufficient quality data to verify that the agreed upon results have been met. Documentation allows the project manager and the public to assess the decisions that the owner/operator made during corrective action. EPA strongly encourages owner/operators to use the data quality objective process as a framework to explain their data and decisions in the context of facility goals. (see Data Quality Objectives for Remedial Response Activities, OSWER Directive 9335.0-7B and Guidance for the Data Quality Objectives Process, EPA/600/R-96/055, Sept. 1994)

i. Does tailored oversight mean less communication between the owner/operator and the project manager?

Tailored oversight means more effective and timely communication between the project manager and the owner/operator. Section II.g indicated that we generally expect use of tailored oversight approaches to mean an increase in the use of meetings, briefings and other communication methods to identify and resolve issues early on rather than using typical requirements for formal documentation. This informal approach reduces the amount of formal procedure but keeps the owner/operator in more constant contact with the project manager.

j. What general activities occur during a cleanup that a project manager should discuss with an owner/operator before, during, and after developing a tailored oversight plan?

The following are general activities typically used in characterizing and remediating a facility. The activities do not distinguish between the project manager's or the owner/operator's responsibility, but

rather what should happen when both work together. They may seem overly simplified but we think that recognizing and understanding each one is a good starting point for project managers and owner/operators involved in a facility cleanup.

General Cleanup Activities

- Review site history
- Determine what problems exist & where they are
- Stabilize problems if they are an imminent threat to human health or the environment
- Notify and solicit input from the public at the beginning of the corrective action, at key junctures, and as appropriate given site-specific circumstances
- Work with appropriate parties to determine how decisions will be made for the following:
 - relative priority of problems
 - appropriate parties to determine land use
 - establish cleanup goals and risk levels
- Develop reasonable alternatives for cleaning up priority problems
- Evaluate remedy alternatives
- Make decisions (relative priority, land use, cleanup goals and risk levels, which remedy will be used) using the rules you developed above that include consideration of all key stakeholder opinions and values
- Implement the remedy
- Keep good records and document all key decisions throughout
- Determine if institutional controls will be necessary, as early as possible.
- Revisit decisions, as appropriate, as you obtain updated information and stakeholder issues come into play

k. Does tailored oversight mean reduced cleanup costs?

While the actual remedy cost (e.g., excavation and treatment) may not change, innovative technologies, presumptive remedies, tailored interim deliverables, and other results-based tools may provide substantial cost savings in the total costs expended by the implementing agency and owner/operator.

l. How does tailored oversight ensure public involvement?

EPA is committed to substantial and meaningful involvement of communities throughout RCRA corrective action activities. Tailored oversight by implementing agencies that accompanies a results-based cleanup should not mean less public involvement. We encourage project managers and owner/operators to develop and maintain effective community participation and involvement by developing a public participation strategy at the beginning of the corrective action process.

Timely and meaningful public participation is generally key to community acceptance of the remedy. In addition to establishing mandatory public involvement at critical stages of decision making in corrective action activities, EPA continues to encourage frequent, meaningful public involvement for corrective

action activities in general.

The most current guidance on EPA's general expectations for public participation is contained in chapter four and five of *The RCRA Public Participation Manual* (EPA 530-R-96-007, September 1996, www.epa.gov/correctiveaction). It calls for early participation, and a shared responsibility between you and the facility owner/operator for public participation activities. Another reference on public participation is the new *RCRA Expanded Public Participation Rule* (40 CFR Parts 9, 124 and 270) which contains many of the ideas from the manual. (It should be noted that additional agreements might be made between you and the owner/operator when discussing goals early on in the results-based tailored oversight process. These additional agreements might include more extensive public participation where there is less regulatory oversight.)

Throughout corrective action public participation should be provided, as appropriate, given site-specific circumstances and community interest. At a minimum, public participation should generally be provided at the following junctions:

- Initiation of Corrective Action;
- Selection of significant interim measures, as appropriate;
- Prior to remedy proposal, when community acceptance is weighed as a remedy balancing factor;
- Selection of final remedy;
- Completion of Corrective Action

m. How will the overseeing agency use enforcement under tailored oversight approaches?

If an owner/operator hasn't met deadlines or the agreed upon results then there are a number of enforcement options. Identifying enforcement options is especially important when tailored oversight is extended over a long period of time. For significant non-compliance, enforcement options may include taking formal enforcement action (*e.g.*, enforcing the corrective action provisions of the permit, issuing an order, referring to Department of Justice), collecting stipulated penalties, and putting owner/operators on strict oversight and compliance schedules. The Office of Site Remediation Enforcement is drafting a memorandum to the EPA Regional offices that discusses creative approaches for ensuring timely corrective action.

n. What activities can an owner/operator take a greater role in under a tailored oversight approach in appropriate circumstances?

The following list categorizes these activities:

| | |
|------------------------------|---|
| Site Characterization | Where RCRA Facility Assessments (RFAs) have not yet been completed, owner/operators may choose to conduct their own site assessment or characterization, and submit the report for your review. If you believe the site assessment is adequate, you can approve and adopt it as the RFA for the facility. |
| Evaluate and meet EIs | Under a tailored oversight plan, the owner/operator may assess current human exposures and evaluate potential contaminated groundwater migration pathways as priority activities of the site investigation. |
| Interim Measures | The owner/operator should implement interim measures when it is necessary to meet the two EIs. The interim measures implemented should be consistent with the long term cleanup objectives for the facility. |
| Public Involvement | Stakeholder involvement is essential in all corrective action cleanups, regardless of the levels of oversight used. |
| Remedy | EPA expects the owner/operator to develop and recommend remedies, including proposed media cleanup levels, points of compliance and compliance time frames. You will make the final remedy decision after considering the owner/operator's recommendation and public comments. The owner/operator's documentation is essential regardless of the level of oversight used. If appropriate, remedy implementation may become a low oversight stage. |

o. Once I develop a tailored oversight plan for a facility, what goals and milestones should I use to measure progress?

The primary goal of the corrective action program is the protection of human health and the environment. Using the overall program objectives - facility-wide assessments, addressing all SWMU releases, selecting remedies within an acceptable risk range and hazard index, public participation throughout corrective action, and a preference for treatment of principle threats - you should develop an oversight plan tailored to the specific remedial objectives and results sought for the facility. For example, you should select a remedy that protects human health and the environment, attains media clean-up standards, controls the source(s) of releases to reduce or eliminate further releases of hazardous waste, and complies with applicable standards for waste management. We recommend that you and the owner/operator state these goals and milestones where appropriate in all key decision documents and reports.

For the near term, you and the facility owner/operator should focus on the two EIs, which are the primary near-term goals of the corrective action program. Because the EIs focus on results, they can

serve well as interim results measures for remedial activities. While stabilization is an appropriate near-term goal, you should emphasize that cleanup or final remedy is the ultimate goal for corrective action. Additionally, you and the owner/operator should establish, at the beginning, public participation milestones throughout the corrective action process.

p. Conclusion

Tailored oversight is an integral part of results-based corrective action. Project managers and owner/operators should be looking at their oversight levels on a site-specific basis and making the appropriate adjustments. Tailored oversight allows project managers to eliminate administrative or technical steps, as appropriate, for example for owner/operators who have shown that they have agreed to, and are capable of, meeting the environmental objectives established for their facility. Tailored oversight is designed to lead to a focus on environmental results rather than unnecessary process steps and ensure that each corrective action-related activity, at any given facility, directly supports cleanup goals at that site.

Contacts

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Note: This document provides guidance to EPA and states regarding facilities subject to RCRA Corrective Action. It also provides guidance to the public and the regulated community on how EPA intends to exercise its discretion in implementing its statutory authorities and regulations. The document does not, however, substitute for EPA's statutes or regulations, nor is it regulation itself. Thus, in and of itself, it cannot impose legally-binding requirements on EPA, States or the regulated community, and may not apply to a particular situation based upon the circumstances. EPA may change this guidance in the future as appropriate.